

Chemokines and Chemokine Receptors

Chemokine	Other names	Receptor	Key/main immune function
CXCL1	GRO α , MGSA, mouse KC	CXCR2	Neutrophil trafficking
CXCL2	GRO β , MIP-2 α , mouse MIP2	CXCR2	
CXCL3	GRO γ , MIP-2 β	CXCR2	
CXCL4	PF4	?	Procoagulant
CXCL5	ENA-78, mouse LIX	CXCR2	Neutrophil trafficking
CXCL6	GCP-2 (no mouse)	CXCR1, CXCR2	
CXCL7	NAP-2	CXCR2	
CXCL8	IL-8 (no mouse)	CXCR1, CXCR2	
CXCL9	Mig	CXCR3	Th1 response; Th1, CD8, NK trafficking
CXCL10	IP-10	CXCR3	
CXCL11	I-TAC	CXCR3	
CXCL12	SDF-1	CXCR4	Bone marrow homing
CXCL13	BLC, BCA-1	CXCR5	B cell and Tfh positioning LN
CXCL14	BRACK	?	Macrophage skin homing (human)
CXCL15	Lungkine (mouse only)	?	?
CXCL16	/	CXCR6	NKT and ILC migration and survival
CCL1	I-309, mouse TCA3	CCR8	Th2 cell and Treg trafficking
CCL2	MCP-1, mouse JE	CCR2	Inflammatory monocyte trafficking
CCL3	MIP-1 α	CCR1, CCR5	Macrophage and NK cell migration; T cell-DC interactions
CCL4	MIP-1 β	CCR5	
CCL5	RANTES	CCR1, CCR3, CCR5	
CCL6	C-10, MRP-1 (mouse only)	Unknown	?
CCL7	MCP-3, mouse Fic or MARC	CCR2, CCR3	Monocyte mobilization
CCL8	MCP-2	CCR1, CCR2, CCR3, CCR5 (human); CCR8 (mouse)	Th2 response; skin homing (mouse)
CCL9/10	MIP-1 γ , MRP-2 (mouse only)	Unknown	?
CCL11	Eotaxin-1	CCR3	Eosinophil and basophil migration
CCL12	MCP-5 (mouse only)	CCR3	Inflammatory monocyte trafficking
CCL13	MCP-4 (no mouse)	CCR2, CCR3, CCR5	Th2 responses
CCL14	HCC-1 (no mouse)	CCR1	?

CCL15	Leukotactin-1, HCC-2, MIP-5 (no mouse)	CCR1, CCR3	?
CCL16	HCC-4, NCC-4, LEC (no mouse)	CCR1, CCR2, CCR5	?
CCL17	TARC	CCR4	Th2 responses, Th2 cell migration, Treg, lung and skin homing
CCL18	PARC, DC-CK1 (no mouse)	CCR8	Th2 response; marker AAM, skin homing
CCL19	ELC, MIP-3 β	CCR7	T cell and DC homing to LN
CCL20	MIP-3 α , LARC	CCR6	Th17 responses; B cell and DC homing to gut-associated lymphoid tissue
CCL21	SLC, 6CKine	CCR6, CCR7	T cell and DC homing to LN
CCL22	MDC	CCR4	Th2 response, Th2 cell migration, Treg migration
CCL23	MPIF-1, MIP-3 (no mouse)	Unknown	?
CCL24	Eotaxin-2, MPIF-2	CCR3	Eosinophil and basophil migration
CCL25	TECK	CCR9	T cell homing to gut; thymocyte migration
CCL26	Eotaxin-3	CCR3, CX3CR1	Eosinophil and basophil migration
CCL27	CTAK	CCR10	T cell homing to skin
CCL28	MEC	CCR3, CCR10	T cell and IgA plasma cell homing to mucosa
XCL1	Lymphotactin α , SCM-1 α	XCR1	Cross-presentation by CD8 ⁺ DCs
XCL2	Lymphotactin β , SCM-1 β (no mouse)	XCR1	
CX3CL1	Fractalkine	CX3CR1	NK, monocyte, and T cell migration

Abbreviations: AAM, alternatively activated macrophages; DC, dendritic cell; ILC, innate lymphoid cell; LN, lymph node; NK, natural killer; Tfh, T follicular helper cell; Th, T helper cell; Treg, regulatory T cell.

Reference: Griffith J W, Sokol C L, Luster A D. Chemokines and chemokine receptors: positioning cells for host defense and immunity.[J]. Annual Review of Immunology, 2014, 32(1):659-702.